

**Pre-Calculus
District 2853**

Month	Content	Performance Standards Addressed Grades 9-11 Grades 11-12	Skills for Student Achievement	Assessment	
September	Graphing and Curve Fitting	Mathematical Reasoning - Benchmarks #1, #4 Computation & Operation - Benchmarks #1, #2, #3, #4, #5 Patterns and Functions - Benchmarks #1, #3, #5 Algebra - Benchmarks #1, #2, #3, #4, #11, #12	Algebra - Benchmarks #1, #2, #3	Graph functions on the coordinate plane, alone and with a graphing calculator Use a graphing calculator to find curves of best fit for real world data	Tests, Quizzes and Daily Assignments
October	Quadratic Power and Exponential Functions	Computation & Operation - Benchmarks #5, #6 Patterns and Functions - Benchmarks #1, #5 Algebra - Benchmarks #6, #7, #8, #11, #12	Algebra - Benchmarks #2, #3, #4, #5, #6	Problem solve with power and exponential functions Solving problems with complex zeros	Tests, Quizzes and Daily Assignments
November	Rational Functions Graphs and Logarithmics	Mathematical Reasoning - Benchmarks #1, #4 Computation & Operation - Benchmarks #5, #6 Patterns and Functions - Benchmark #2	Algebra - Benchmarks #2, #3, #4, #5, #6, #7, #8, #9, #14	Problem solve using rational functions Compute and graph a functions inverse Use natural and common logs	Tests, Quizzes and Daily Assignments
December	Complex Numbers Exponential and Logarithmic	Patterns and Functions - Benchmarks #2, #4	Algebra - Benchmarks #5, #6, #10, #13, #14, #15	Problem solve with exponential and logarithmic functions Write equations and graph relationships with polar coordinate system	Tests, Quizzes and Daily Assignments
January	Polar Geometry and Complex Plane	Computation & Operation - Benchmark #3 Geometry	Trigonometry and Geometry - Benchmarks #1, #2,	Graph functions in the complex planes Use DeMoivre's Theorem	Tests, Quizzes and Daily Assignments

		- Benchmark #2	#3, #4, #5	<ul style="list-style-type: none"> Solve work and force vectors Calculate dot product 	
February	Vectors and Conic Sections	Geometry - Benchmark #2	Algebra - Benchmarks #11, #12	<ul style="list-style-type: none"> Use parametric equations to solve real world problems Write equations for and graph conic sections Use parametric equations to describe the conic sections 	Tests, Quizzes and Daily Assignments
March	Conic Sections and Rotation and Translation	Geometry - Benchmark #6	Algebra - Benchmarks #11, #12	<ul style="list-style-type: none"> Use trigonometry to be able to write equations for rotation and translation of conic sections Solve systems of equations using various methods 	Tests, Quizzes and Daily Assignments
April	Limits and Continuity Differentiation			<ul style="list-style-type: none"> Finding limits Define and analyze continuity Compute derivatives of functions using various methods (product rule, chain rule, etc.) Write equations of tangent lines 	Tests, Quizzes and Daily Assignments
May	Differentiation of Polynomial, Logarithmic & Exponential Functions			<ul style="list-style-type: none"> Use derivatives to find maximums and minimums Compute derivatives of natural logarithms Simplify expressions that involve the exponential function Calculate integrals 	Tests, Quizzes and Daily Assignments